

Maintenance #9

Unit 1

Name: _____

Date: _____ Period: _____

Unit 1... Connections to Algebra

Part 1.1 – Using Variables

_____ 1) Which is an algebraic expression for "six less than k "?

A) $\frac{6}{k}$

B) $\frac{k}{6}$

C) $6 - k$

D) $k - 6$

_____ 2) Which is an algebraic expression for "the product of a and 10"?

A) $a + 10$

B) $a - 10$

C) $10a$

D) $\frac{a}{10}$

_____ 3) Which is an algebraic expression for "9 more than v "?

A) $v + 9$

B) $v - 9$

C) $9 - v$

D) $9v$

_____ 4) A container of milk contains 64 ounces. Which equation models the number n of ounces remaining after you have drunk m ounces?

A) $m - 64 = n$

B) $64 - m = n$

C) $n - 64 = m$

D) $n - m = 64$

_____ 5) Which equation models the relationship in the table if r represents the row number and t represents the number of tulips?

A) $r = 3t$

B) $\frac{r}{t} = 3$

C) $t = r + 3$

D) $t = 3r$

Row Number	Number of Tulips
1	3
2	6
3	9
4	12

_____ 6) Which is an algebraic expression for "the quotient of $r + 5$ and b "?

A) $\frac{r + 5}{b}$

B) $\frac{r}{b + 5}$

C) $\frac{b}{r + 5}$

D) $\frac{b}{r} + 5$

Part 1.2 – Exponents and Order of Operations

_____ 7) Simplify: $5^3 - 15 \div 2 + 2$

A) 2

B) 57

C) 112

D) 119.5

_____ 8) Simplify: $8(5-3)^3 + 9$

- A) 73 B) 57 C) 40 D) 22

_____ 9) Evaluate $2ab + c$ for $a = 3.3$, $b = 4.5$, and $c = 2$.

- A) 18.4 B) 31.7 C) 32.8 D) 41.6

_____ 10) Evaluate $(r-s)^2$ for $r = 9$ and $s = 6.5$.

- A) 2.5 B) 3.5 C) 6.25 D) 12.25

_____ 11) A shirt is on sale for \$25 at the local department store. There is also 4% sales tax. What is the total cost of the shirt, including the sales tax?

- A) \$25 B) \$26 C) \$29 D) \$35

_____ 12) You can find the distance d an object falls in feet for time t in seconds using the formula $d = 16t^2$. Suppose a ball is dropped out of a window of a tall building. How far will the ball fall in 3 seconds?

- A) 144 ft B) 96 ft C) 48 ft D) 16 ft

Part 1.3 – Exploring Real Numbers

_____ 13) Which number has the same value as $-\left|-\frac{3}{4}\right|$?

- A) -0.75 B) -0.34 C) 0.34 D) 0.75

_____ 14) Which group of numbers is ordered from least to greatest?

- A) $-0.7, -\frac{3}{4}, -1$ B) $-1, -\frac{3}{4}, -0.7$ C) $-1, -0.7, -\frac{3}{4}$ D) $-\frac{3}{4}, -0.7, -1$

_____ 15) Suppose a is a nonzero integer. Which statement is never true?

- A) $a > -a$ B) $a < -a$ C) $|a| = -a$ D) $|a| = -|a|$

_____ 16) Which number is NOT an integer?

- A) -10 B) $-\frac{2}{3}$ C) 0 D) 5

_____ 17) Suppose your brother says that fractions are rational numbers, but fractions are not integers. Which number is a counterexample for this statement?

A) $\frac{10}{3}$

B) $\frac{5}{3}$

C) $-\frac{5}{3}$

D) $-\frac{9}{3}$

_____ 18) Which set of numbers is most reasonable to use to describe the area of your kitchen floor?

A) whole numbers

B) integers

C) rational numbers

D) real numbers

Part 1.4 – Adding Real Numbers

_____ 19) Simplify: $10 + |-3| + (-3)$

A) 16

B) 10

C) 7

D) 4

_____ 20) Evaluate $(3a + b) + (-20)$ for $a = 5$ and $b = -1$.

A) -6

B) -2

C) 20

D) 22

_____ 21) Which expression has a value different from the others?

A) $-7 + 3$

B) $5 + (-9)$

C) $-8\frac{2}{3} + 4\frac{2}{3}$

D) $-9 + 13$

_____ 22) In a 12-hour period, the temperature rose from -12°F to 18°F . Find the increase in temperature in degrees?

A) 30

B) 6

C) -6

D) -30

_____ 23) The value of $-(-(-27)))$ is NOT the same as which expression?

A) $-29 + 2$

B) $-12.8 + (-14.2)$

C) $-42 + 17$

D) $8 + (-35)$

_____ 24) Suppose you have \$95 in your checking account. You pay for a \$34 sweater using your debit card. Then you deposit a \$32 check. Later, you withdraw \$16 at the supermarket. What is the balance in your account?

A) \$145

B) \$81

C) \$77

D) \$13

Part 1.5 – Subtracting Real Numbers

_____ 25) Evaluate $-|a - b| + |c|$ for $a = -3$, $b = 4$, and $c = -4$.